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Here, on Mt. Rose, Nevada, Dr. J. F. Church made the first western snow survey 50 years ago.



SNOW SURVEY and WATER SUPPLY FORECASTS

for ARIZONA

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THE REPORT OF A PARTY OF THE PA

MAN L. 1559

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

TO RECIPIENTS OF COOPERATIVE SNOW SURVEY AND WATER SUPPLY FORECAST REPORTS:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Fortunately, most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from fore-knowledge of the runoff.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, about 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1300 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

By relating snow survey measurements taken over a period of years to spring-summer runoff during the same period, relationships have been developed which make it possible to forecast seasonal runoff several months in advance of occurrence. In order to make a forecast, once a forecast relationship has been developed, the maximum snow water content at previously selected key snow courses is usually entered in the forecast relationship. More accurate forecasts are often obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast relationships.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions.

PUBLISHED BY SOIL CONSERVATION SERVICE

REPORTS	ISSUED	COOPERATING WITH	LOCATION
RIVER BASINS			
Colorado. Rio Granoe	MONTHLY (FEB. MAY)	COLO, EXP. STATION	FT. Collins, Colo.
COLUMBIA Includes Alaska	MONTHLY (JAN MAY)	loaho State Engineer	BOISE, IOAHO
UPPER MISSOURI	MONTHLY (FEB MAY)	Mont.Agr.Exp.Station	BOZEMAN, MONTANA
West-Wioe	(OCT. 1, APR. 1	COOPE RATORS	PORTLANO, OREGON
STATES			
ARIZONA	SEMI-MONTHLY(JAN. 15-APR.1)	SALT R. VALLEY WATER USERS ASSOCIATION	PHOENIX, ARIZONA
NE VA OA	MONTHLY (FEBAPR.)	NEVAOA STATE ENGINEER	RENO, NEVAOA
Ore gon	(YAM - , NAL)	ORE.AGR.EXP.STATION	PORTLANO, OREGON
UTAH	MONTHLY (JAN MAY)	UTAH STATE ENGINEER UTAH AGR.EXP.STATION	SALT LAKE CITY, UTAH
WASHINGTON	MONTHLY (FEB, - MAY)	Wash. State Dept OF Conservation	Spokane, Washington
WYOMING	MONTHLY (FEB JUNE)	WYOMING STATE ENGINEER	
Copies of the	various reports may be se	ecured from: Head, Water Supply	Forecasting Section

Copies of the various reports may be secured from: Head, Water Supply Forecasting Section Soil Conservation Service 209 S.W. 5th Avenue, Portland 4, Oregon

PUBLISHED BY OTHER AGENCIES

OTHER SNOW SURVEY REPORTS	
BRITISH COLUMBIA MONTHLY	(FEBJUNE) COMPTROLLER, WATER RIGHTS BR., DEPT. OF LANDS
	ANO FORESTS, PARLIAMENT BLOGS, VICTORIA, B.C.
CALIFORNIAMONTHLY	(FEBMAY)

for

ARIZONA

(Salt, Verde, Gila and Part of Lower Colorado River Basin)

Issued

March 3, 1959

Report Prepared

by

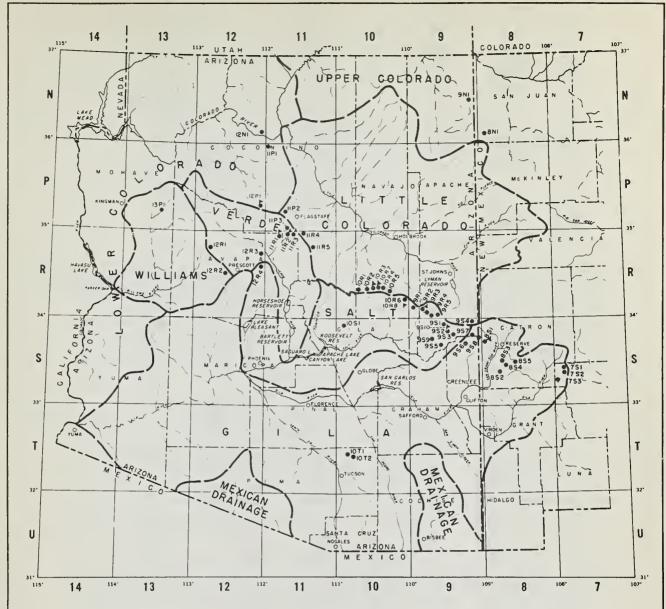
George Watt, Snow Survey Supervisor Soil Conservation Service Post Office Box 929 Phoenix, Arizona

Issued by

Robert V. Boyle
State Conservationist
Soil Conservation Service

Victor I. Corbell
President
Salt River Valley Water Users' Ass'n.

of Local Street



LEGEND

ORAINAGE BASIN BOUNDARY

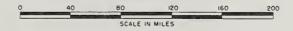
13 U 12 ● SNOW COURSE

SNOW COURSE and SOIL MOISTURE STATION

13 U8 SOIL MOISTURE STATION ONLY

ARIZONA COOPERATIVE SNOW SURVEYS

SNOW COURSES AND DRAINAGE BASINS
JANUARY 1959



INDEX to SNOW COURSES and SOIL MOISTURE STATIONS

NUMBER ***	NAME	SEC	TWP	RGENHH	ELEVATION	RIVER BASIN
11P3 9S1 10T1 9S6 9S3	Antelope Park Baldy (p) Bear Wallow Beaver Head Big Lake Knoll	29 28 6 13 2	19N 7N 12S 4N 5N	16E 30E	7300 9125 8100 8000 8800	VerdeDiscontinued Salt-Little Colorado Gila Salt-Frisco Salt-Frisco-Little Colorado Discontinued
12N1 12R1	Black Canyon Black River Divide Bright Angel Camp Wood Canyon Creek		13S 6N 33N 16N 11N	11W#*** 27E 3E 6W 15E	6790 9100 8400 5700 7500	Gila Salt-Little Colorado Lower Colorado Williams-Verde Salt-Little ColoradoReplaced by 10R7-M
11R2-M 12P1-M	Canyon Creek #2 Casner Park Chalender Corduroy Creek La Corn Creek (p) La			8E 3E Long.110°C		Salt-Little Colorado Verde Verde Salt Salt Not Read
8S3	Corner Mountain	7	10S	17W****	8850	Gila-Frisco Not Read Salt-Frisco Salt-Little ColoradoDiscontinued Salt-Little Colorado Verde-Little Colorado
9S7	Coronado Trail	26	5N	30E	8000	
1OR2	Elk	31	11N	11E	7600	
1OR6	Forest Dale	2	9N	21E	61430	
11P2	Fort Valley	22	22N	6E	7350	
9R5	Ft. Apache	18	7N	27E	9160	Salt-Little Colorado
8S1-M	Frisco Divide	31	6S	20W*****	8000	Frisco-Gila
12R4	Gaddes Canyon	11	15N	2E	7600	Verde-Agua Fria
10R5	Gentry	36	11N	15E	7600	Salt
11P1	Grand Canyon	21	30N	UE	7500	Lower Colorado
11R5	Happy Jack	30	17N	9E	7630	Verde Salt-Little Colorado Gila Williams-Verde Salt
10R4	Heber (p)	28	11N	15E	7600	
7S2	Inman	6	11S	10W****	7800	
12R2	Iron Springs	22	114N	3W	6200	
9S2	Maverick Fork (p)	13	6N	27E	9050	
9R4	McKay Peak	13	7N	2LE	8250	Salt Not Read
9R2-M	McNary	14	8N	23E	7200	Salt-Little Colorado
9R1	Milk Ranch	28	8N	23E	7000	Salt
12R3	Mingus Mountain	3	15N	2E	7100	Verde-Agua Fria
8S2	Mogollon	2	11S	19W ^{™™™}	7000	Frisco-Gila
	Mormon Lake Mormon Mountain Munds Park N-Bar Lake Negrito	13 14 7 16 6	18N 18N 18N 10S 10S	8E 8E 7E 17W***** 16W*****	7350 7500 6500 8600 8200	Verde-Little Colorado Verde Verde Gila Not Read Gila Not Read
954	Nutrioso Pacheta At Roof Butte Rose Canyon State Line	23	6N	30E	8500	Salt-Frisco-Little Colorado
955		Town	of Ma	averick, An	riz.§ 7800	Salt
9N1		15	8N	6W*****	8500	Little Colorado Not Read
10T2		15	12S	16E	7300	Gila
9S8		6	6S	21W****	8000	Gila-Frisco
7S1	Taylor Creek	20	10S	10W****	7850	Gila Salt Not Read Little ColoradoNot Read Williams Salt=Little Colorado
9R3	Trout Creek	5	7N	24E	6400	
8N1	Washington Pass L	at.36°	°05'N	• Long•108°	750'W § 8600	
13P1	Willow Ranch	16	21N	11W	5000	
1OR1	Woods Canyon	15	11N	13E	7640	
1081	Workman Creek	33	6N	14E	6900	Discontinued Salt

^{*} Soil Moisture Station only.

^{***} Number indicates location of snow course within coordinate rectangle, thus 9Nl is Course #1 in coordinate rectangle 9N.

 $[\]ensuremath{\bowtie}\xspace$ All in Gila and Salt River Base and Meridian except where otherwise indicated.

^{****} New Mexico Principal Meridian

^{******} Navajo Base

M= Soil Moisture Station installed on or in vicinity of snow course.

^{§ =} Unsurveyed

⁽p)= Storage gage installed on or in vicinity of snow course.

ARIZONA WATER SUPPLY OUTLOOK

March 1, 1959

SNOW COVER: The snow cover in the mountains of the State averages about 60% of normal. On the western portion of the Mogollon Rim the cover is about 90% of normal. In the White Mountains, the best indicator for the flow in the Salt River, the snow courses only measured 46% of average. In general, the snow cover at the higher elevations is farther below normal than at lower elevations, and the eastern part of the State is farther below normal than is the western or central mountains.

STREAM FLOW: The March through May runoff for the Arizona rivers is expected to be approximately only one-third of average. The flow for the Salt and Verde rivers system for the same period is forecast for 170,000 acre feet, or 34% of average. The carry-over storage in this system is adequate for irrigation of land under the reservoirs for the coming season. However, it will leave the reservoirs low for the year following, and water supplies will be critical if another poor year follows this one.

The forecast for the flow for the San Francisco and Gila Rivers for the March through May period is 31% of normal. The water supply will be short for the San Carlos Project, with little inflow expected for the San Carlos Reservoir.

The late spring irrigation supply from direct diversions from the rivers will be short throughout the State.

RESERVOIRED WATER: The water stored in the eight major reservoirs serving central Arizona is 110% of average. The storage in the Salt and Verde Rivers system of reservoirs is 933,000 acre feet, or 123% of average. This will be an adequate supply for the coming irrigation season. The San Carlos Reservoir contains 108,030 acre feet, which is 59% of average.

SOIL MOISTURE: Soil moisture in the mountain forests is good at the higher elevations. Soil moisture units in the lower forests showed moisture in the first foot in the four-foot profile, but it is still deficient in the lower three-feet.



STREAM FLOW FORECASTS - MARCH 1, 1959

The following summarized runoff forecasts are based principally on mountain snow cover and on the assumption that precipitation and temperature will be near average from the present time to the end of the forecast period. Appreciable deviations from normal of temperature and/or precipitation will correspondingly modify these forecasts.

	SEASONAL FORE	STREAM F				CRE FEET USIVE
BASIN, STREAM AND STATION	Forecast Runoff 1959	Percent 15-Year Average	Meas 1958	ured Ru 1957	noff 1956	1938-52 Average
Salt River at Intake	90.0	31	527.4	113.5	105.4	290.4
Tonto River above Roosevelt	10.0	29	71.7	11.4	4.5	$34.0 \frac{1}{}$
Verde River above Horseshoe	70.0	39	245.2	58.5	31.1	179.8
Gila River at Virden	15.0	32	144.9	8.6	6.0	46.5
Frisco River at Clifton	12.5	30	186.2	12.4	6.7	42.2
Little Colorado River above Lyman Dam 2/	1.0	12	21.5	1.3	2.5	8.6 1/

^{1/} Average is for less than 15 years of record in the 1938-52 period.

^{2/} Forecast period for Little Colorado River above Lyman Dam is for March-June inclusive.

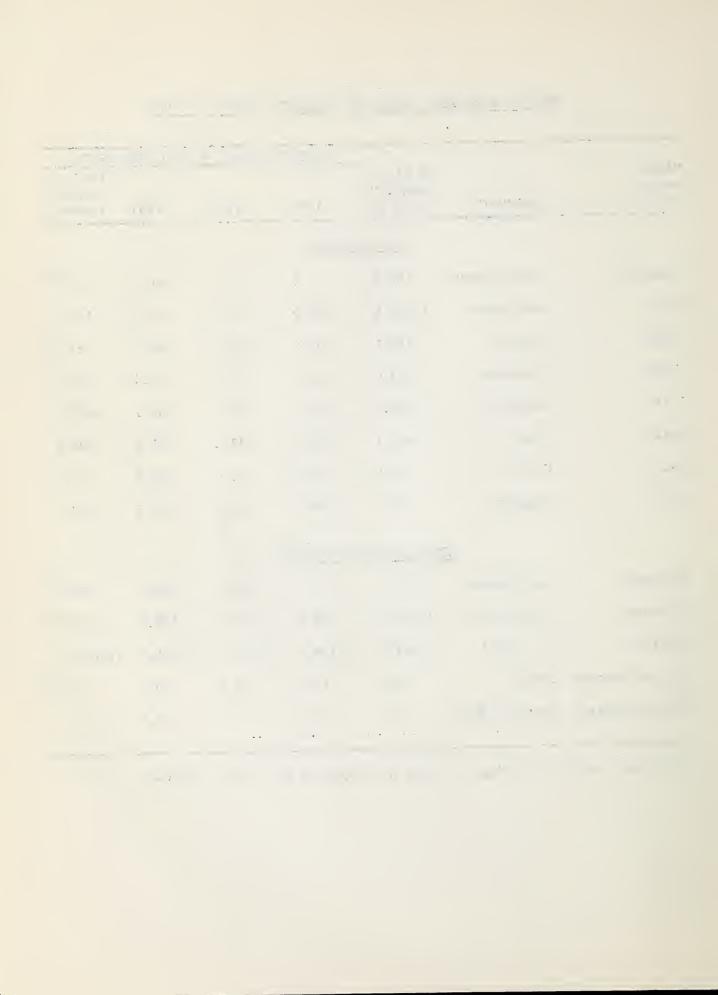
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STATUS OF ARIZONA RESERVOIR STORAGE - MARCH 1, 1959

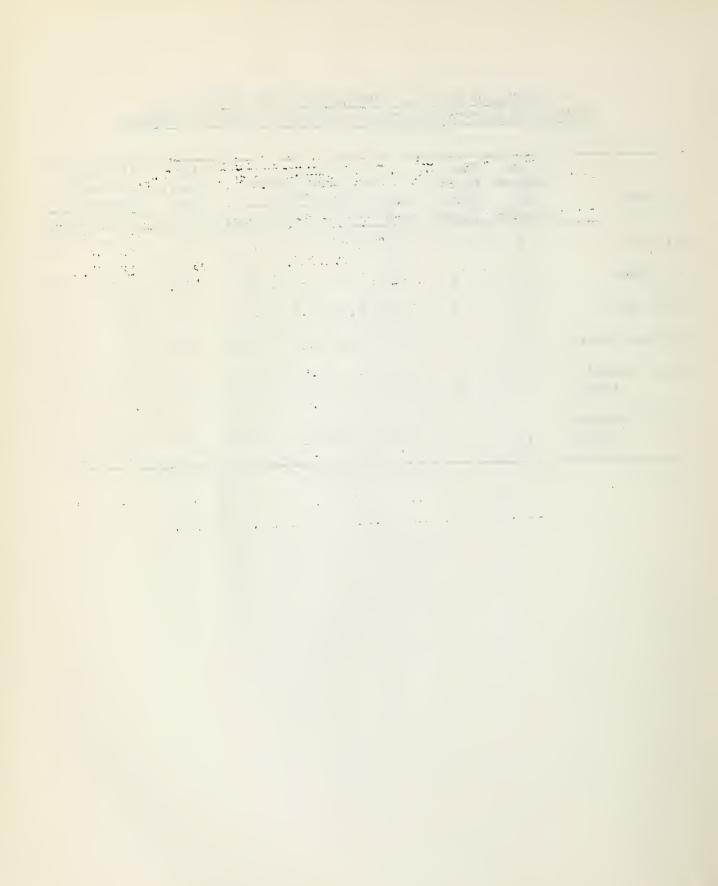
			USABLE	STORAGE -	1000 ACRE	FEET
BASIN and/or STREAM	RESERVOIR	USABLE CAPACITY 1000s AF	1959	1958	1957	15-Year Average 1938-52
		GILA D	RAINAGE			
Agua Fria	Lake Pleasant	163.8	18.5	12.7	24.4	24.3 ¹
Gila	San Carlos	1,205.0	108.0	63.7	10.3	183.3
Verde	Bartlett	180.0	97.6	139.4	154.2	57.3
Verde	Horseshoe	143.0	25.4	12.8	55.4	18.91
Salt	Roosevelt	1,381.6	450.6	56.0	163.1	427.8
Salt	Apache	245.1	238.3	232.2	109.2	188.1
Salt	Canyon	57.8	57.0	52.6	55.8	37.6
Salt	Saguaro	69.8	64.1	63.6	60.0	28.5
	L	OWER COLOR	ADO DRAINA	GE		
Colorado	Lake Havasu	619.4	547.2	527.2	606.8	568.1 ¹
Colorado	Lake Mohave	1,810.0	1,696.8	1,739.0	1,688.0	1,107.0
Colorado	Lake Mead	27,207.0	21,194.0	19,711.0	11,695.0	18,855.0
Little Colorado	Lyman	30.6	18.7	8.5	0.1	8.4
Little Colorado	Show Low Lake	5.1	0.1	2.5	0.6	***

^{1/} Average is for less than 15 years of record in the 1938-52 period.



SUMMARY OF MARCH 1, 1959 ARIZONA SNOW SURVEYS AND COMPARISON OF DATA WITH THAT OF PREVIOUS YEARS BY WATERSHED

WATERSHED	Courses D		Snow Depth Snow Water Content in Inches					1959 Water Content in Percent of	
	Average	Inches	1959	1958	1957	Normal	1959 Percent	1958	Normal
Gila River	7	1	0.2	1.0	0.0	1.8	20	20	11
Salt River	13	5	1.4	2.4	1.2	3.1	28	58	45
Verde River	11	7	2.4	0.4	0.6	2.2	34	600	109
Williams River	2	6	2.3	0.0	0.0	0.9	38	co co co	255
Lower Colorado River	3	8	2.5	0,3	0.0	2.2	31	833	114
Little Colorado River	11	7	1.9	1.8	1.1	3.2	27	106	59

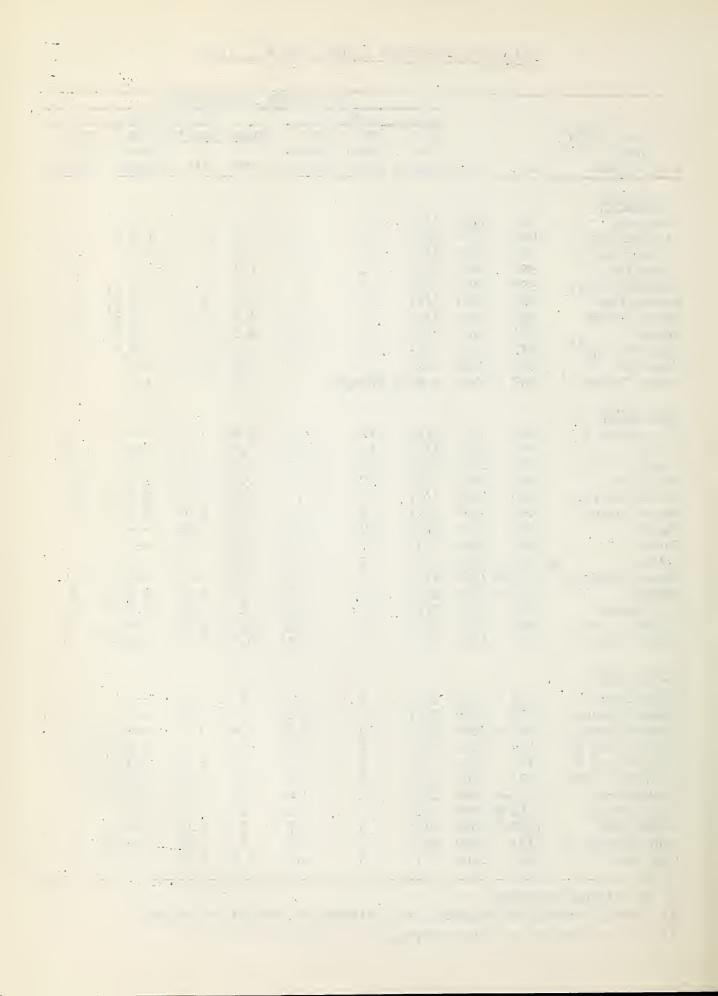


			SNOW COVER MEASUREMENTS						
			1959						
DRAINAGE BASIN			Date	Snow	Water	Water	Conte	nt (In.)	Prior
and			of		Content			1938-52	Yrs. of
SNOW COURSE	No.	Elev.	Survey	(In.)	(In.)	1958	1957	Average	Record
GILA RIVER									
Nutrioso 2/	954	8500	2/27	T	T	0.7	0.0	2.2	21
Bear Wallow 3/	10T1	3100	2/27	4	1.3	1.8	0.0	1.9 2/	11
Frisco Divide	8S1-M		2/27	3	0.9	2.4	0.0	2.0	21
State Line	958	8000	2/27	2	0.4	1.2	0.0	2.8	21
Coronado Trail	9S7	8000	2/27	Ī	T	0.9	0.0	3 5	21
Beaver Head	986	8000	2/27	Ť	T	1.1	0.0	3.2 <u>2/</u> 3.2 <u>2/</u> 0.5 <u>2/</u> 0.7 <u>2/</u>	20
Taylor Creek	7S1	7850	2/28	Ō	0.0	0.5	0.0	$0.5\frac{2}{2}$	16
Inman	7S2	7800	2/28	0	0.0	0.5	0.0	$0.7\frac{2}{3}$	12
Page Conven 3/	10T2	7300	2/27	0	0.0	0.6	0.0	0.4 2/	11
Rose Canyon 3/	8S2	7000	2/28	T	T.0	1.6	0.0	0.4	6
1.000									6
Black Canyon 3/	783	6790	Report	Delay	ea	0.0	0.0		0
SALT RIVER									
Ft. Apache 1/	9R5	9160	2/26	18	4.6	6.8	5.0		8
Baldy 1/	981	9125	2/26	13	2.8	7.7	3.6		9
Maverick Fork	982	9050	2/26	10	2.3	9.6	7.4		8
Nutrioso	984	8500	2/27	T	T	0.7	0.0	2.2	21
Coronado Trail	987	8000	2/27	T	T	0.9	0.0	3.5	21
Beaver Head	986	8000	2/27	T	T	1.1	0.0	3.2 2/	20
Pacheta	985	7800	2/27	0	0.0	2.0	0.0		8
Gentry	10R5	7600	2/27	9	2.9	0.8	0.0		7
	/10R4	7600	2/27	7	2.4	0.7	T		3
Canyon Creek #2	10R7-M		2/27	7	2.3	0.6			3
McNary	9R2-M		2/27	3	0.8	T	0.0	$\frac{2.7}{0.9} \frac{2}{2}$	20
Milk Ranch	9R1	7000	2/27	Ō	0.0	T	0.0	0.9 2/	18
Workman Creek	1051	6900	3/2	5	1.9	0.9	0.0		7
Forest Dale	10R6	6430	2/27	1	0.3	0.0	0.0	1.2 2/	20
VERDE RIVER									
	1100	7600	0.400		_	_	•		-
Happy Jack .	11R5	7630	2/28	T	T	T	0.0		7
Gaddes Canyon	12R4	7600	2/27	15	5.2	1.9	2.6		5
Mormon Mountain	11R3-M		2/28	10	2.9	1.6	3.7	2/	9
Mormon Lake 1/	11R4	7350	2/28	7	2.1	0.8	T	$6.4\frac{21}{21}$	12
Fort Valley 1/	11P2	7350	3/2	8	2.7	0.3	0.0	$2.9 \frac{27}{2}$	12
Mingus Mountain	12R3	7100	2/27	5	1.7	T	0.0	$\begin{array}{c} 6.4 \frac{2}{2}, \\ 2.9 \frac{2}{2}, \\ 1.9 \frac{2}{2}, \\ 3.5 \frac{2}{2}, \\ \end{array}$	12
Chalender	12P1-M		2/27	12	3.4	T	0.0	3.5 4	1.4
Casner Park	11R2-M		2/28	8	2.3	T	T		8
Munds Park	11R1-M		2/28	4	1.7	T	0.0	2/	8
Iron Springs 1	12R2	6200	2/25	7	2.0	T	0.0	$\frac{1.8}{1.1} \frac{2}{2}$	13
Camp Wood	12R1	5700	3/1	4	2.5	0.0	0.0	1.1 =	13

^{1/} On adjacent drainage.

^{2/ 1938-52} average is estimated from existing records within period.

^{3/} Not included in watershed averages.



ARIZONA SNOW SURVEYS - ABOUT MARCH 1, 1959

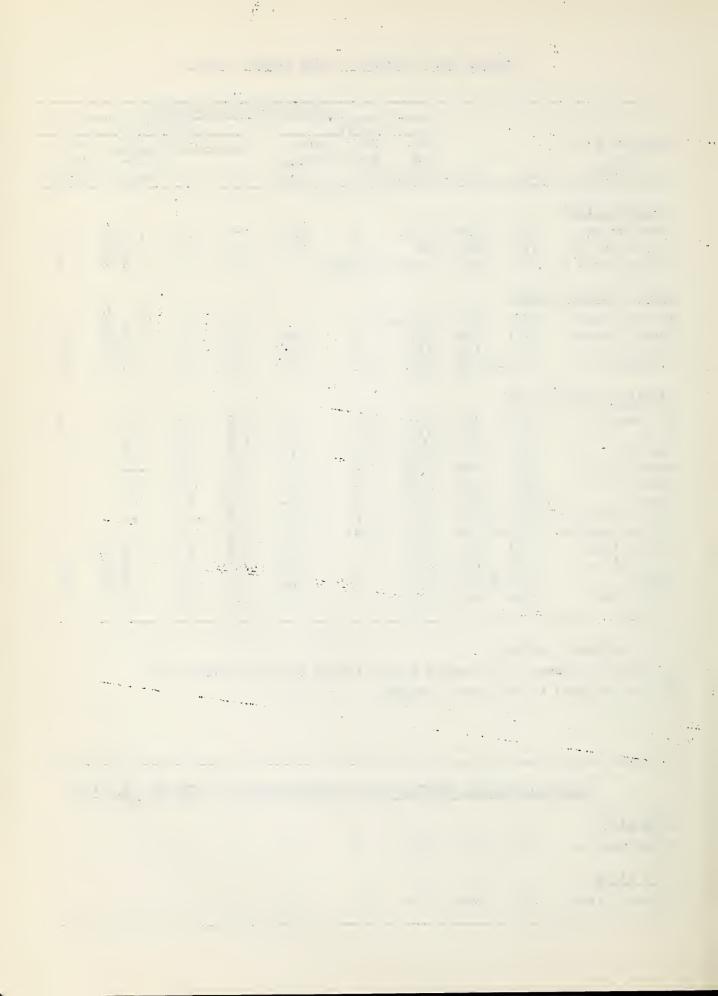
			SNOW COVER MEASUREMENTS						
				1959			PAST	RECORD	
DRAINAGE BASIN			Date	Snow	Water	Water	Conte	nt (In.)	Prior
and			of	Depth	Content			1933-52	Yrs. of
SNOW COURSE	No.	Elev.	Survey	(In.)	(In.)	1958	1957	Average	Record
WILLIAMS RIVER								2/	
Iron Springs	12R2	6200	2/25	7	2.0	T	0.0	$\begin{array}{c} 1.8 \ \frac{2}{2} \\ 1.1 \ \frac{2}{2} \\ 0.3 \ \frac{2}{2} \end{array}$	13
Camp Wood 1/	12R1	5700	3/1	4	2.5	0.0	0.0	$1.1\frac{2}{2}$	13
Willow Ranch 3/	13P1	5000	Report	Delay	ed	0.0		0.3 4	9
LOWER COLORADO R	IVER								
Bright Angel 3/	12N1	8400	No Sur			6.7	13.4	$ \begin{array}{c} 10.6 \frac{2}{2} \\ 2.7 \frac{2}{2} \\ 2.9 \frac{2}{2} \\ \end{array} $	12
Grand Canyon	11Pl	7500	2/27	vey 5	1.8	0.5	0.0	$\frac{10.0}{2.7} \frac{21}{21}$	12
Fort Valley	11P2	7350	3/2	8	2.7	0.3	0.0	$\frac{2.9}{2}$	12
Chalender 1/	12P1-M		2/27	12	3.4	T	0.0	3.5 2/	12
LITTLE COLORADO	RIVER								
Ft. Apache	9R5	9160	2/26	18	4.6	6.8	5.0		3
Baldy	951	9125	2/26	13	2.8	7.7	3.6		9
Nutrioso	984	8500	2/27	\mathbf{T}' .	T	0.7	0.0	2.2	21
Happy Jack 1/	11R5	7630	2/28	T	T	T	0.0		7
Gentry	10R5	7600	2/27	9	2.9	0.8	0.0		7
Heber 3	/10R4	7600	2/27	7	2.4	0.7	T		8
Canyon Creek #2	10R7-M		2/27	7	2.3	0.6			1
Mormon Mountain	11R3-M		2/23	10	2.9	1.6	3.7	2/	9
Mormon Lake	11R4	7350	2/28	7	2.1	0.8	T	$\begin{array}{c} 6.4 \frac{2}{2} \\ 2.9 \frac{2}{2} \\ 2.7 \frac{2}{2} \end{array}$	12
Fort Valley	11P2	7350	3/2	3	2.7	0.3	0.0	$2.9\frac{21}{21}$	12
McNary	9R2-M		2/27	3	0.8	T	0.0		20
Forest Dale	10R6	6430	2/27	1	0.3	0.0	0.0	1.2 4	20

^{1/} On adjacent drainage.

GILA RIVER Black Canyon 783 6790 2/19 5 0.9 SALT RIVER Workman Creek 1081 6900 2/16 13 3.3	DELAYEI	REPOR	TS R	ECEIVED	SINCE	LAST BULLETI	N - FEBRUARY	15, 1959
	n	783	6790	2/19	5	0.9		
	 ek 1	.0S1	6900	2/16	13	3.3		

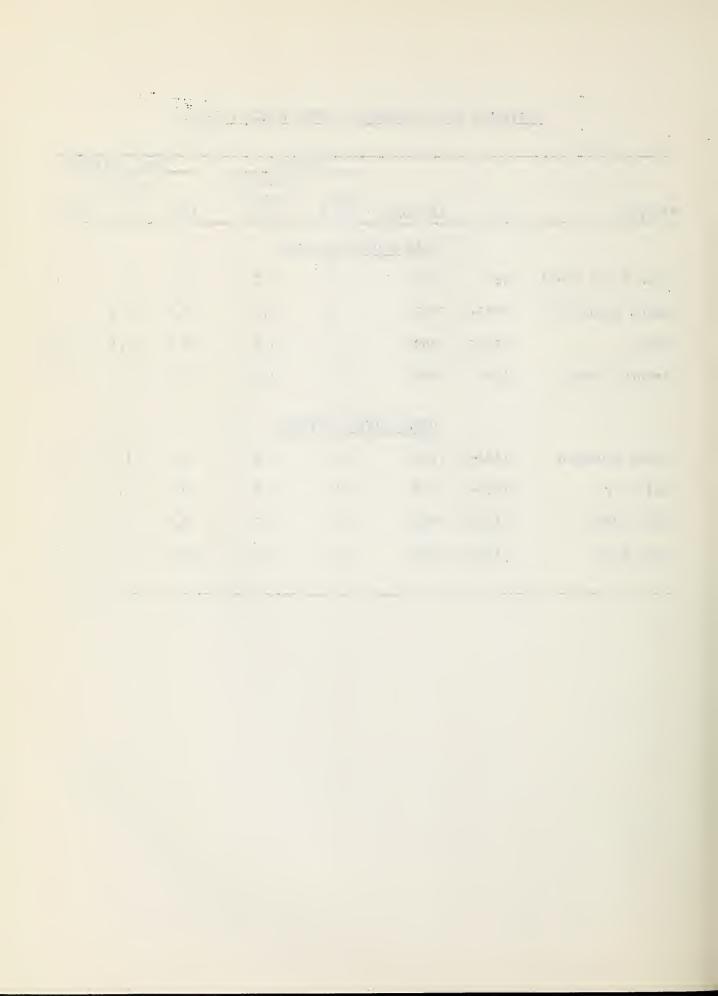
^{2/ 1938-52} average is estimated from existing records within period.

^{3/} Not included in watershed averages.



AVAILABLE SOIL MOISTURE - ABOUT MARCH 1, 1959

			PRO	OFILE	SC	OIL MOIS	TURE
			Depth	Available Capacity	in Inches		
STATION	No.	Elevation	(In.)	(In.)	1959	1958	1957
		SALT RIVE	R DRAIN	AGE			·
Black River Divide	9810	9100	48	8.2	7.8	8.1	8.1
Canyon Creek #2	10R7-M	7500	48	8.5	8.5	8.4	***
McNary	9R2-M	7200	48	8.0	3.7	4.1	8-2
Corduroy Creek	10R8	6000	48	8.0	0.4	2.1	6.0
		VERDE RIV	ER DRATI	NAGE			
Mormon Mountain	11R3-M	7500	48	8.3	8.1	7.9	8.3
Chalender	12P1-M	7100	48	8.3	0.4	4.7	8.1
Casner Park	11R2-M	6950	48	8.7	6.9	7.2	3.4
Munds Park	11R1-M	6500	48	9.0	12.6	3.7	8.5



LIST OF SNOW SURVEYORS

SNOW COURSE	SURVEYOR
Baldy	SCS and SRVWUA
Bear Wallow	Forest Service - W. D. Nelson
Beaver Head	N. A. Josh
Black Canyon	Wayne Black
Bright Angel	National Park Service
Camp Wood	Mrs. C. C. Merritt
Canyon Creek #2	SCS and SRVWUA
Casner Park	SCS and SRVWUA
Chalender	Forest Service - M. C. Oleson & F. E. Page
Coronado Trail	Forest Service - Bill Brainard
Forest Dale	Fort Apache Reservation - Valverde & Endfield
Frisco Divide	Forest Service - Frank Carroll
Ft. Apache	SCS and SRVWUA
Fort Valley	Rocky Mt. Forest & Range Experiment Station
Gaddes Canyon	SCS - Richard Enz
Gentry	SCS and SRVWUA
Grand Canyon	National Park Service - Vincent Hefti
Happy Jack	Julius Brantley
Heber	SCS and SRVWUA
Inman	C. H. McCauley
Iron Springs	Ernest Saxby
McNary	Fort Apache Reservation - Valverde & Endfield
Maverick Fork	SCS and SRVWUA
Milk Ranch	Fort Apache Reservation - Valverde & Endfield
Mingus Mountain	SCS - Richard Enz
Mogollon	J. R. Wray
Mormon Lake	SCS and SRVWUA
Mormon Mountain	SCS and SRVWUA
Munds Park	SCS and SRVWUA
Nutrioso	Forest Service - Bill Brainard
Pacheta	Foch Phillips
Rose Canyon	Forest Service - W. D. Nelson
State Line	Forest Service - Frank Carroll
Taylor Creek	C. H. McCauley
Willow Ranch	Tiny Miller
Workman Creek	Rocky Mt. Forest & Range Experiment Station

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The Following Organizations Cooperate in the Arizona Snow Survey Work

FEDERAL

Department of Agriculture

Soil Conservation Service

Forest Service

Apache Forest Coconino Forest Coronado Forest

Gila Forest

Kaibab Forest

Prescott Forest

Rocky Mountain Forest and Range Experiment Station

Department of Commerce Weather Bureau Arizona Section

Department of Interior

Bureau of Reclamation Region III

Geological Survey Arizona District

Bureau of Indian Affairs
Fort Apache Reservation

National Park Service
Grand Canyon National Park

Gila Water Commissioner Safford, Arizona

IRRIGATION PROJECTS

Salt River Valley Water Users' Association Phoenix, Arizona

San Carlos Irrigation and Drainage District Coolidge, Arizona

PRIVATE

Southwest Lumber Mills, Inc. McNary, Arizona

Other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.



Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

"The Conservation of Water begins with the Snow Survey"